



Department of Energy

Germantown, MD 20874-1290

APR 29 1999

Mayor James Matayoshi
Rongelap Atoll Local Government Council
Republic of the Marshall Islands
P.O. Box 1766
Majuro, Marshall Islands 96960

Dear Mayor Matayoshi:

The Rongelap Atoll Local Government (RALGOV) has expressed interest in obtaining the names of Marshallese evaluated for anemia in the chromium-51 and tritiated water clinical tests conducted by Brookhaven National Laboratory (BNL) in the early 1960's. As a result of a recent consolidation of patient records from the Department of Energy's (DOE) Marshall Islands Medical Program into an electronic format, we now have an improved capability to search the database.

BNL's reports of the anemia tests are available on the website of DOE's Office of International Health Programs (EH-63) at <http://tis.eh.doe.gov/ihp>, and are among the 77 boxes of documents which DOE has provided to the Republic of the Marshall Islands Government.

BNL Report 908 (T-371) entitled, "Medical Survey of the People of Rongelap and Utirik Islands Nine and Ten Years After Exposure to Fallout Radiation (March 1963 and March 1964)," is document number 0403547 among the Marshall Islands Historical Documents on the EH-63 website. Table 20 of this Report, captioned "Total Blood and Red Cell Volume Data" (Enclosure 1), lists 20 of the 21 participants by "Subject No.": one participant is identified as "Jeton." Each "Subject No." corresponds to the medical record of a patient in DOE's Marshall Islands Medical Program. We are, therefore, able to identify all of the participants in the 1963 BNL anemia studies.

There is less complete information available for the 1961 and 1962 studies than for the 1963 studies, but we believe that 9 of the 13 Marshallese participants in the earlier studies can be identified.

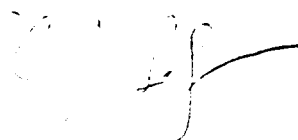
BNL Report 780 (T-296) entitled, "Medical Survey of Rongelap People Eight Years After Exposure to Fallout (January 1963)," is document number 0403546 on the EH-63 website noted above. Table 15 of this report, captioned "Blood Studies (1961, 1962)" (Enclosure 2) lists 23 study participants, including 13 individuals identified as "Micronesian" and 10 as "Caucasian." Each participant is identified by initials (e.g., "T." or "Em.") and body weight. Furthermore, it



appears from correspondence of the physician who conducted the studies that some 6 Marshallese participated in both groups of anemia studies. By correlating all of these data with age and weight information in DOE patient records, we have identified 9 Marshallese participants in the 1961 and 1962 blood volume studies utilizing chromium-51.

In compliance with considerations of personal privacy mandated by U.S. law, DOE can disclose this information directly to the individuals concerned. Therefore, we will notify each identified living DOE patient/participant in the 1961-1963 BNL anemia tests of this information. We will also provide information to the DOE/Pacific Health Research Institute Special Medical Care Program staff so that they can address questions patients might have during their visits to the DOE medical clinic at Kwajalein or Majuro.

Sincerely,



Paul J. Seligman, M.D., M.P.H.
Deputy Assistant Secretary
for Health Studies

2 Enclosures

cc w/enclosures:

Minister Phillip Muller, RMI
Ambassador Banny de Brum, RMI
Senator Johnsay Riklon, Rongelap
Howard Hillis, Esq.
Ambassador Joan Plaisted

Table 14

Abnormal Chromosomes in Peripheral Blood Cultures

Subject No.	Total counts	Dicentrics	Other
64	2	—	—
10	59	—	—
11	24	—	—
14	26	1	—
27*	30	1	1 minute
41	27	—	—
50	69	—	—
58	32	—	—
69	19	—	—
79	19	—	—
80	16	—	—

* Bone marrow smears showed 3 dicentrics on scanning.

small amounts, however, and glycosuria was demonstrated only in those that showed urine elevations of 2+ to 4+. Four urines showed a slight amount of protein, but other examinations did not reveal abnormalities which might be associated with proteinuria.

Blood Sugar Determinations

Fasting blood sugar analyses were carried out on 8 people (all in the unexposed group) who had shown urine positive for sugar on the previous survey. Of these, 4 showed elevated levels (Nos. 853, 884, 893, and 991). Non-fasting blood sugar determinations were carried out routinely on 72 people in the exposed and 125 in the unexposed groups. Elevations > 160 mg % were found in 4 of these, 1 exposed (No. 29) and 3 unexposed (Nos. 932, 936, and 1042). The somewhat higher incidence of diabetes in the Marshallese people has been commented on in previous reports.

Protein-Bound Iodine

Since previous survey results had shown protein-bound iodine levels on the high side of normal, 14 sera were obtained on individuals for repeat analyses this year. The levels varied between 4.6 and 12.0 μg % with a mean of 8.6; these are again generally on the high side of normal.

Table 15

Blood Volume Studies (1961, 1962)

Subject	Race*	Wt., lb	Increase, cc		Decrease, cc	
			RBC	Plasma	RBC	Plasma
P.C.	C	158	—	—	100	750
H.M.	C	105	—	250	100	—
A.	C	153	—	—	400	600
B.W.	C	161	—	—	550	1000
S.S.	C	165	—	—	350	600
H.	C	156	—	—	250	100
L.C.	C	110	—	—	250	500
Em.	M	172	—	—	250	500
B.	M	150	—	—	—	100
S.	M	138	100	—	—	—
Ed.	M	155	—	—	250	100
T.	M	122	—	—	550	600
A.	M	102	—	—	400	—
Sh.	M	109	—	—	300	200
Af.	M	126	—	—	300	—
J.	M	135	—	—	200	150
El.	M	140	—	—	600	500
Me.	M	123	123	100	—	—
K.	M	140	—	—	200	700
Ja.	M	132	—	—	800	770
R.	C	156	—	—	450	400
F.	C	183	—	—	400	700
Mac.	C	—	—	—	200	200

*C = Caucasian, M = Micronesian.

Total Urine Iodine and Creatinine

The purpose of these analyses was to determine whether the rather high protein-bound iodine levels reported in the Marshallese might be related to high iodine levels in the diet. Total iodine and creatinine analyses were carried out on 10 urine samples obtained from subjects who had previously shown relatively high protein-bound iodine levels. The levels for total iodine varied between 5.2 and 66.0 μg % (av, 18.6), and the creatinine levels varied between 0.025 and 0.80 g/l (av, 0.52). These levels were considered to be in the normal range, although the creatinine levels were somewhat high because of alkalinity of the urine samples. Therefore it did not appear that the iodine in the diet could account for the generally higher protein-bound iodine levels observed. The cause of this slight elevation remains to be clarified.